Summer 2000 Flash Flood Quiz

Please complete this quiz and return it to Mark's box by October 20th. If you have any questions, please contact me.

1. You are the public/long term forecaster on a Thursday morning midshift. The models have been very consistent the past few runs on developing a heavy rain event that will affect the CWFA on Friday night and Saturday. Recent heavy rains have lowered the flash flood guidance below an inch, so flooding will likely occur with any additional heavy rainfall. Based on the information, you are reasonably confident that the event will occur. What is the **most** appropriate action to take.

   a. Take no action
   b. Issue a flood potential outlook (ESFSTL)
   c. Issue a special weather statement (SPSSTL)
   d. Issue a flash flood watch (FFASTL)

2. Fill in the following blanks with Flood or Flash Flood.

   A _____ is usually caused by a convective rainfall which has a duration of less than 6 hours.

   A _____ is usually caused by a stratiform rainfall which has a duration of 6 hours or more.

3. While working a convective event, you notice that a severe thunderstorm warning is about to expire for Gasconade county at the same time flash flood guidance is being exceeded near Owensville. An HP supercell is moving into Gasconade county from Osage county. This storm just produced golfball sized hail eight miles east of Linn and is maintaining its intensity. Rainfall rates with this storm are in excess of 2.5 inches/hour and it is moving east at 20 mph. What is the most appropriate action?

   a. Issue a combined severe thunderstorm and flash flood warning.
   b. Issue separate severe thunderstorm and flash flood warnings.

4. What is the minimum number of follow-up Flash Flood Statements (FFSSTL) required for a typical 3 hour duration Flash Flood Warning?

   a. 1
   b. 2
   c. 3
   d. 4

5. Write a test flash flooding warning for whatever place and scenario you choose and attach it to this quiz.

For questions 6 through 12, you will need to access the On-Line Hydrology Manual on the LSX Intranet. Simply open a browser, click on program areas, then hydrology. While on shift, you receive a call from the St. Charles County Sheriff saying that the torrential rains the past two days has caused the Lake St. Louis Dam on Peruque Creek to instantaneously fail. The depth of the water was estimated between 25 and 30 feet and Interstate 70 was closed. The failure time was 10 minutes ago.

6. From the dam catalog, what is the nearest downstream point? _____

7. What is the peak depth expected at this location? _____

8. How long will it take for the flood wave to reach this location? _____

9. Determine the appropriate product to issue, write it, and attach it to the quiz.

10. If this failure had been had been slowly developing, decide what the appropriate product to issue, write it, and attach it to the quiz.

11. Use of Headwater Guidance. Assume that a daily homogenous rainfall has occurred overnight (03-09Z) over portions of central Missouri. The following rainfall observations have been reported:

Taos	2.95
Jefferson City	5.50
Brazito	2.02
Wardsville	5.50
Hickory Hill	3.70

Via the instructions in the Hydrology Section of the Intranet, determine the crest stage and time on the Moreau River at Jefferson City, MO.

12. Use of Flood Forecasting Tables. Assume a fairly homogenous rainfall has occurred during the night (01-07Z) over portions of south central Missouri. The following rainfall observations have been reported:

Centerville	4.10
Beulah	4.30
Redford	3.05
Patterson	4.42
Glover	4.52

Determine the crest stage and time on the Black River at Annapolis, MO.